



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

PM82/1006

THOMAS W FERGUSON  
54861 HIGH RIDGE ROAD  
BELLAIRE OH 43906

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/270,639	03/15/99	008	ZANELLI, M	3661 10/06/00
First Named Applicant	FERGUSON, 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION VEHICLE DATA RECORDER

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2	701-035.000	T41	UTILITY	YES	\$620.00	01/08/01

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

**HOW TO RESPOND TO THIS NOTICE:**

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**III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.**

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

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UNITED STATES DEPARTMENT OF COMMERCE  
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**NOTICE OF ALLOWANCE AND ISSUE FEE DUE**

PM51/1011

THOMAS W FERGUSON  
54861 HIGH RIDGE ROAD  
BELLAIRE OH 43906

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/270,639	03/15/99	008	ZANELLI, M	3661 10/06/00
First Named Applicant	FERGUSON, 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION: VEHICLE CRASH DATA RECORDER

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2	701-035.000	T41	UTILITY	YES	\$620.00	01/08/01

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

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**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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10/15/99 PERCUSUI

PMS2/1006

THOMAS W. FERGUSON  
54801 HIGH RIDGE ROAD  
BELL ALPINE, CA 95004

EXAMINER
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ART UNIT	PAPER NUMBER
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3601

5/B

DATE MAILED:

10/05/00

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

**NOTICE OF ALLOWABILITY**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to amendment filed 8/15/00

☒ The allowed claim(s) is/are 12-19

☒ The drawings filed on 8/15/00 are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☐ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☐ including changes required by the Notice of Draftperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. \_\_\_\_\_

☐ including changes required by the proposed drawing correction filed on \_\_\_\_\_, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

**Attachment(s)**

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Notice of Draftperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☐ Interview Summary, PTO-413

☒ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☐ Examiner's Statement of Reasons for Allowance

*Michael J. Zanelli*  
MICHAEL J. ZANELLI  
PRIMARY EXAMINER

Art Unit: 3661

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. The application has been amended as follows:

In the specification:

Page 12, line 25: after "accident" inserted --by downloading the stored data to a handheld or portable computing device--; after "passengers" inserted --and/or rescue personnel--.

In the claims:

CANCELED CLAIMS 7-11, SUBSTITUTED THEREFOR NEW CLAIMS 12-19:

12. A self-contained apparatus to be installed upon motor vehicles for detecting and recording vehicle operating systems data and vehicle response to kinetic forces that act upon the vehicle during an accident trigger event, comprising:

a plurality of electrical connections for collecting pertinent data on vehicle systems, said data including speed of the vehicle, seat belt use, forward or reverse gear status and brake activation, said data being in part analog and in part digital; and

a multistage memory scheme for storing collected vehicle data, the memory scheme including a short term active memory capable of retaining a short time segment of collected data, a second stage cache memory to temporarily store data transferred from the active memory to prevent overwriting of data stored in the active memory and a non-volatile memory capable of permanently storing data for periods of at least 30 days.

2 *B cont.*  
213. The self-contained apparatus of claim <sup>1</sup>~~12~~, wherein said apparatus further comprises:

a rechargeable back-up battery system for enabling the transfer of data recorded in active and cache memory to permanent memory in the event of an interruption of electrical power resulting from of any one of an occurrence of an accident trigger event and operator action.

3 <sup>1</sup>~~14~~. The self-contained apparatus of claim ~~12~~, further comprising:

means for transferring the data stored in permanent memory to a hand-held or portable computing device.

4 ~~15~~. A self-contained apparatus for detecting and recording kinetic forces that act upon the vehicle during an accident trigger event, comprising:

Art Unit: 3661

an electronic compass for providing a vehicle heading;

a normally open tilt meter which closes only after the vehicle reaches or exceeds a 90 degree tilt; and

a processing means, coupled to the compass and tilt meter, for discriminating any one of a front to back rollover, a side to side rollover and a vehicle spin.

*B2 Unit.*  
5-16. The self-contained apparatus of claim <sup>4</sup>~~15~~, wherein:

a. a front to back rollover being indicated by activation of the tilt meter with a corresponding 180 degree change in vehicle heading;

b. a side to side rollover being indicated by activation of the tilt meter without a corresponding change in vehicle heading; and

c. a vehicle spin being indicated by a rapid change in vehicle heading without activation of the tilt meter.

*b 17.* A method for detecting and recording vehicle operating systems data and vehicle response to kinetic forces that act upon the vehicle during an accident trigger event, comprising:

collecting pertinent data on vehicle systems through a plurality of electrical connections, said data including speed of the vehicle, seat belt use, forward or reverse gear status and brake activation, said data being in part analog and in part digital; and

Art Unit: 3661

storing collected vehicle data in a multistage memory scheme, the memory scheme including a short term active memory capable of retaining a short time segment of collected data, a second stage cache memory to temporarily store data transferred from the active memory to prevent overwriting of data stored in the active memory and a non-volatile memory capable of permanently storing data for periods of at least 30 days.

BZ  
conc.  
7-18. The method of claim <sup>6</sup>17, further comprising:

transferring data recorded in active and cache memory to permanent memory in the event of an interruption of electrical power resulting from of any one of an occurrence of an accident trigger event and operator action.

8-19. The method of claim <sup>6</sup>17, further comprising:

transferring the data stored in permanent memory to a hand-held or portable computing device.

3. The above substitute claims were drafted after consulting with Mr. Ferguson (*pro se*).

The claims essentially mirror the claims as originally filed and as submitted in the amendment filed 8/15/00. The added method claims correspond to the use of the apparatus defined in claims 12-14. The specification was amended to include specific reference to the subject


Art Unit: 3661

matter set forth in claims 14 and 19. Basis for this language is found in claim 6 as originally filed.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Michael Zanelli** whose telephone number is **(703) 305-9756** (M-Th, 6:30-4:00 PM).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is **(703) 308-1113**.

/mjz  
October 3, 2000

  
**MICHAEL J. ZANELLI**  
**PRIMARY EXAMINER**